

**THE *ABANTIS BISMARCKI*—GROUP OF SKIPPER
BUTTERFLIES, WITH THE DESCRIPTION OF *ABANTIS
BAMPTONI* sp. nov. (LEPIDOPTERA: HESPERIIDAE)**

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INTRODUCTION

THE GENUS *Abantis* Hopffer, 1855 is composed of a number of very rare species, many of which are not represented even in large museum collections, and most of which are present only in very small numbers.

Abantis bismarcki Karsch, 1892 was described from near Bismarcksburg on the Togo/Ghana border and is found from Ghana to southern Sudan and western Kenya (Larsen 1991), where it is rare throughout. During 35 years of collecting in the Volta Region of Ghana, Father Theodor Maessen (pers. comm.) collected only about a dozen, virtually all hilltopping on the same hill. The Natural History Museum, London, has only seven or eight and the National Museums of Kenya only seven. There are confirmed records from Ghana, Togo, northern Nigeria, the drier parts of Uganda, southern Sudan and western Kenya.

Abantis arctomarginata Lathy, 1904 was described as a species from Zomba, Mlanje in Malawi, but was downgraded to a subspecies of *A. bismarcki* by Aurivillius (in Seitz 1925). Evans (1937) reinstated it as a distinct species, based on differences in the male genitalia. It differs more decisively from *A. bismarcki* in having a distinctly rounded hindwing, the tornus not being produced at all. The narrower black marginal band is of even width, not broadening towards the tornus. Males look rather like females of the other species. In *A. bismarcki* the tornus is distinctly drawn out, as in most other members of the genus. The rest of the hindwing is snow-white without orange shading along the anal fold as in *A. bismarcki*. On the forewing the white hyaline spots in spaces 1b, 2, and 3 are at least twice as long as in *A. bismarcki*. We have verified that the holotype is of the round winged form.

The distribution of *A. arctomarginata* is generally considered to stretch from Zimbabwe to Shaba, Malawi, and much of southern and central Tanzania. We have, however, seen specimens of true *A. arctomarginata* only from Malawi and south-central Tanzania (Iringa). It is, again, a very scarce species. There are less than ten in The Natural History Museum, London, all from Malawi, and none in the National Museums of Kenya. Kielland (1990) never found it in Tanzania.

It has largely been overlooked that other populations in southern Africa are quite different from the true *A. arctomarginata*, in fact being in several respects closer to *A. bismarcki*. This form was actually figured by Neave (1910) as the putative female of what is now known as *A. lucretia lofu*

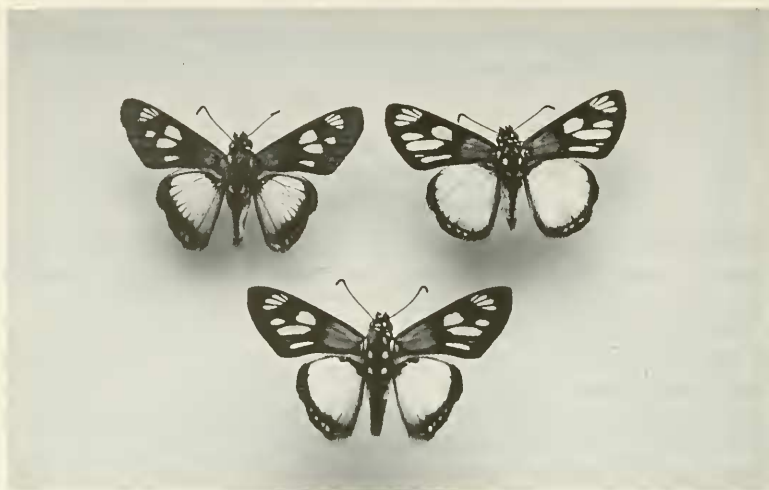


Fig. 1. Top left: *A. bismarcki* male from Kimaeti, western Kenya, v.1993 (S.C. Collins leg.). Top right: *A. arctomarginata*, male from Madibira Rd., Iringa, south-central Tanzania, ii.1992 (T.C.E. Congdon leg.). Bottom: bred male of *A. bauptoni* from Harare, Zimbabwe, iii.1991 (J.I.W. Mullin).

Neave, 1910; this obvious error was spotted by Aurivillius (in Seitz 1925), who described it as *A. bismarcki arctomarginata* f. *neavei* (type locality: near Lake Benguela, Zambia). Aurivillius clearly intended it to be an infrasubspecific name and it does not seem subsequently to have been made available under the International Code for Zoological Nomenclature.

Evans (1937) said nothing specific about the status of f. *neavei*, simply listing it as a synonym of *A. arctomarginata*, but he must later have reconsidered the matter, since the arrangement of his synoptic collection at The Natural History Museum includes three subspecies, ssp. *bismarcki*, ssp. *arctomarginata*, and ssp. *neavei*. However, this was never published. Carcasson *et al.* (in press) treat it as infrasubspecific.

Thus, there are three clearly distinct taxa in the *A. bismarcki*-group, that of Zimbabwe, Zambia, and Shaba being without a valid name. The question is whether or not to treat them as three subspecies of *A. bismarcki* as implied by Evans. We believe the radically different shape of the hindwing of *A. arctomarginata* places it apart from the two others, yet the genitalia — which are not strongly differentiated — place *A. arctomarginata* closer to the other southern species than to *A. bismarcki*, though their wing-shapes are so different. The best solution appears to treat them as three distinct species.

Abantis bamptoni sp. nov.

Male: The russet basal spot of the forewing is larger than in *A. bismarcki* and the white hyaline spots in spaces 1b, 2, and 3 are longer, though not quite as long as in *A. arctomarginata*. In *A. bismarcki* the spot in space 2 is subequal to the cell spot; in *A. bamptoni* the spot is twice as long. The hindwing is not rounded as in *A. arctomarginata*, having the general shape of *A. bismarcki*, but the black margin is not as broad. The edge of the anal fold is usually tinged with orange and the hindwing ground-colour is not as pure white as in *A. arctomarginata*. On the hindwing underside the costa tends to be shaded orange rather than black, though this may be subject to seasonal variation.

Female: Almost identical with the male, but larger. Since females always have more rounded hindwings, the distinction in relation to *A. arctomarginata* is rather less obvious than in the male, but the black hindwing margin remains broader, widening towards the tornus.

Male genitalia: The male genitalia of all three species are very similar, as is the case in other species-groups of the genus, such as *A. nigeriana/pseudonigeriana* and *A. elegantula/maesseni*. They are strongly asymmetrical, since the massive gnathos consists only of the right branch. Despite the superficial resemblance to *A. bismarcki*, the genitalia of *A. bamptoni* are closest to those of *A. arctomarginata*, from which males can be distinguished at a glance because of the rounded hindwing shape. However, the main genitalia difference is rather minor (fig. 2).

HOLOTYPE: We select as holotype the male from Solwezi, N. Zambia, placed as "ssp. *neavei*" in the synoptic collection arranged by W.H. Evans (The Natural History Museum, London).

The species is named in honour Ivan Bampton who has done much research into the early stages of African butterflies over the past 25 years. Given that f. *neavei* has not been in use, and since it was based first on an error by Neave, and then on an incorrect assignment of status by Aurivillius, we have not wished to maintain this name.

Discussion

We have seen specimens of *A. bamptoni* from many localities in Zimbabwe (Bomponi, Vumba, Harare), from the Lake Tanganyika area in Tanzania (Kielland 1990), the Shaba area of Zaire (Mpala), Zambia (Solwezi, Mt. Swebi), and from Mozambique near the Zimbabwe border. The known range thus covers a crescent to the south and west of that of *A. arctomarginata*. Both are strongly disjunct from *A. bismarcki*.

Material of genuine *A. arctomarginata* from Malawi and south/central Tanzania has always been very limited and most published illustrations represent *A. bamptoni*. Thus the series in Pennington (1978) are clearly all *A. bamptoni*, as is the female figured by Kielland (1990). The radically different hindwing shape of the male never leaves the slightest doubt as to which species is involved.

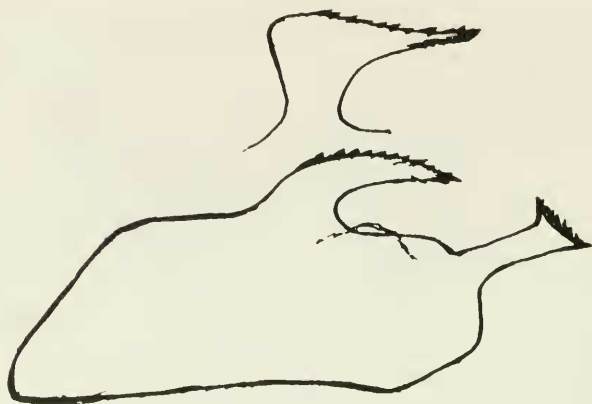


Fig. 2. The male valve of *A. bismarcki* is shown. *A. bamptoni* differs in the shape of the main dorsal process, shown above that of *A. bismarcki*. The valve of *A. bamptoni* does not differ materially from that of *A. arctomarginata*. Overall, the differences in genitalia are rather minor.

A. bismarcki has not been bred; the two other species have both been bred on *Uapaca* (Euphorbiaceae). Both C. Congdon and I. Bampton bred *A. arctomarginata* in southern Tanzania, and J.I.W. Mullin and R. Pare bred *A. bamptoni* on *Uapaca kirkiana* near Harare, after being shown the larval pads by I. Bampton. The eggs are laid singly on the top of the leaf and are covered with the anal hairs of the female, to the extent that the egg cannot be seen. This type of anal hair in the female has evolved independently also in some Lycaenidae (*Satyrinum*, *Pseudaletis*, and *Cupidesthes*).

A. bamptoni is very rarely met with, usually on flowers, and does not seem to engage in hilltopping. *A. arctomarginata* does engage in hilltopping and is more frequently seen in any given locality (I. Bampton, pers. comm.).

Acknowledgements

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White-letter Hairstreak caterpillars in Southwest Norfolk, 1993

Dutch elm disease has remained still very active in Norfolk and Suffolk since the first wave of the disease, and few large trees survive; but along a good many roads, motorways and small lanes there is vigorous elm regrowth commonly to twenty-five feet high and this is comprised largely of *Ulmus procera* the English elm with some East Anglian *U. nitens* and *U. carpiniifolia*. There is also a good deal of elm in pockets scattered through the Scots pine plantations of Thetford Forest, growing as sprawling understorey beneath the enfeebled pines and other trees that have gained foothold; much of this elm is *Ulmus glabra*, the Wych elm, and unlike the other elms it flowers early in life so that much of Thetford Forest understorey elm is of an age now bearing flowers.

An enlightened member of the forest staff when planning clearfalls of the pine some years ago took care to keep out of the felling plan those areas with attractive broadleaved underwood so that they were not cleared and replanted with pine. It was one of these Wych elm sites that attracted my attention in mid-May of this year when pondering on the current state of *Satyrium w-album* Knoch. hereabouts. So I beat the elm heavy in seed and in the course of some two hours counted forty-seven *w-album* larvae in from second to last instar and (as with larvae of Green Hairstreak last year) found the labour of returning larvae to their food so time-consuming that I then ceased beating elm, which was yielding a useful number of *Brachionycha sphinx* Hufn. Some days later I was in another part of the forest about six miles distant where there was a scatter of Wych elm so I tried my hand again and knocked out four larvae at the first strike. Then seeking larvae of *Cosmia affinis* L. I went to a hedge of English elm, for *affinis* is not easy to find on other elms, which stood so hard by the verge of